

- C¹
- b) a system controller external to the shielded room;
 - c) a patient infusion apparatus within the shielded room and including infusion apparatus control means for controlling an infusion operation; and
 - d) a communicating control link between the system controller and the infusion apparatus control means, the control link adapted to be substantially non-reactive with the magnetic field of the imaging system.
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13. (Twice Amended) A patient infusion system for use with a magnetic resonance imaging system to generate images of a patient, the patient infusion system comprising:

- C²
- a) a room shielded from electromagnetic interference by an electromagnetic shield including a viewing window;
 - b) a system controller located outside the room;
 - c) a patient infusion apparatus located inside the room including infusion apparatus control means for controlling an infusion operation;
 - d) a communications control link between the system controller and the infusion apparatus control means, the control link adapted to be substantially non-reactive with the magnetic field of the imaging system; and
 - e) an electric drive motor and motor control circuitry separated from the patient infusion apparatus and a non-rigid drive connection between the electric drive motor and the patient infusion apparatus [whereby] wherein the motor is positioned to be substantially non-reactive with [an electromagnetic] the magnetic field of the imaging system.
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32. A patient infusion system for use with a magnetic resonance imaging system, the patient infusion system comprising:

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an infusion apparatus positioned within a room shielded from electromagnetic interference, the infusion apparatus comprising an injector for injecting fluid into a patient during a magnetic resonance imaging procedure;

a system controller positioned external to the shielded room; and

a communication control link between the infusion apparatus and the system controller for controlling the operation of the infusion system, the control link adapted to be substantially non-reactive with the magnetic field of the imaging system.

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33. The patient infusion system of claim 32, further comprising at least one battery for powering the infusion apparatus.

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34. The patient infusion system of claim 33 wherein the system controller comprises a battery charger for recharging the at least one battery.

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38. A method of patient infusion for use with a magnetic resonance imaging system, the method comprising the following steps:

providing a room shielded from electromagnetic interference;

providing a system controller positioned external to the shielded room;

providing an infusion apparatus positioned within the shielded room; and

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transmitting control signals via a communication link between the system
controller and the infusion apparatus, the control signals adapted to be substantially non-
reactive with the magnetic field of the imaging system.

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Please add new claims 50-55 as follows:

2 41 50. A patient infusion system for use with a magnetic resonance imaging
system, the patient infusion system comprising:

C6
a patient infusion apparatus within a room shielded from electromagnetic
interference including a viewing window;

a system controller external to the shielded room; and

a communicating control link between the system controller and the infusion
apparatus, the control link comprising means for transmitting and receiving
electromagnetic energy through the viewing window.

42 41
51. The system of claim 50 wherein the electromagnetic energy is in the
visible light spectrum.

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52. The system of claim 50 wherein the electromagnetic energy is in the
infrared spectrum.

44 41
53. The system of claim 50 wherein the electromagnetic energy comprises
electromagnetic radiation.